

**Abstract**

This invention relates to a general method for detecting pathogenic strains of bacteria which harbour a type III secretion system. More particularly, this invention relates to the methods as applied to the pathogen *Bordetella pertussis*. Furthermore, the invention relates to newly identified polynucleotides within these regions, virulent polypeptides encoded by them and to the use of such polynucleotides and polypeptides, and to their production. More particularly the polynucleotides and polypeptides of the present invention relate to the virulent effector proteins associated with the type III secretion system of *Bordetella pertussis*, which are particularly suitable for vaccine purposes.